

Amendments to the Abstract:

Please replace the Abstract with the following new Abstract:

- 5 A method of diagnosing corrosion risk of a buried pipe due to DC stray currents and/or AC voltages induced in soil employs a metal probe including a first, exposed part having a first specific resistivity, and a second, sealed reference part having a second specific resistivity. The probe is buried in the soil, and the AC current and voltage between the pipe and the probe are measured, from which the spread resistance is determined. The resistances of the first and second probe
- 10 parts are determined by respectively passing first and second excitation currents through the first and second probe parts and measuring the voltages across them. The resistance measurements are stored, and the steps are repeated periodically. The corrosion of the first probe part is determined from the measurements according to an algorithm, and the pipe corrosion risk is diagnosed from an empirical combination of the corrosion of the first probe part, the spread resis-
- 15 tance, and the AC voltage measured.